

ABSTRACT OF THE DISCLOSURE

5 A simulation system is responsive to a plurality of sets of input data for  
simulating an earth formation located in the vicinity of an oilfield reservoir,  
generating a set of simulation results in response to the simulation, and  
displaying the set of simulation results. The simulation system includes a case  
manager adapted for organizing and managing the plurality of sets of input  
data being used by the simulation system. The case manager includes a  
10 plurality of case scenarios organized in a tree-like structure, some case  
scenarios being supersets of other case scenarios in the tree-like structure. An  
operator selects one or more of the case scenarios in the case manager. A case  
builder receives keywords associated with the one or more of the case scenarios  
selected by the operator in addition to keywords originating from one or more  
15 pre-processor programs and possibly raw data, edits and/or changes all the  
keywords from the selected case scenarios and pre-processor keywords in  
response to editing actions taken by the operator, and, responsive thereto,  
generates a set of edited keywords representing edited case scenarios. A run  
manager responds to the set of edited case scenarios from the case builder by  
20 submitting the edited case scenarios to a simulator, the simulator responding  
to the edited case scenarios from the run manager by executing and thereby  
generating a set of simulation results, the set of simulation results from the  
simulator being stored in a results file. The run manager receives the set of  
simulation results from the results file in addition to the set of edited case  
25 scenarios from the case builder thereby enabling an operator to monitor and  
compare via the run manager the set of simulation results received from the  
results file with the set of edited case scenarios received from the case builder.  
A results viewer will display the set of simulation results generated by the  
simulator and a report generator will generate one or more reports which  
30 record the set of simulation results.